5200D TX

SCHEMATICS

tau-tron

A UNIT OF

GENERAL SIGNAL

xtender board
9545 7050

CONTROLLED
DOCUMENT

SHOP
COPY

MAR 2 7 1995

S 5200D TX

SCHEMATICS

COPY

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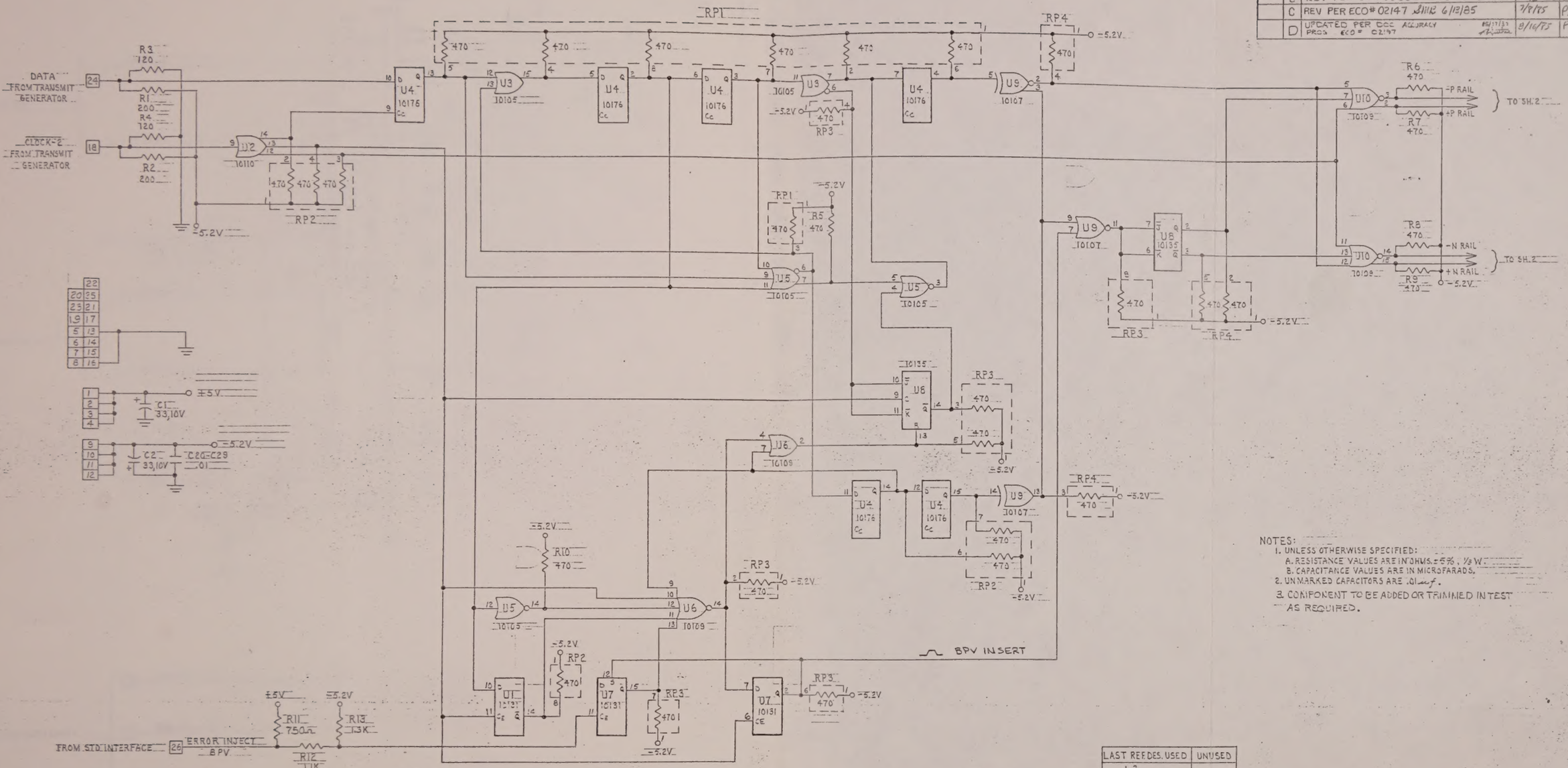
REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	1	REVISED PER PDC 00720	9-18-80	
	A	REVISED & RELEASED PER DCN00784	12-18-80	
	B	REV PER DCN 00862 C.S. 3-16-81	3-18-81	
	C	REV PER ECO# 02147	7/8/85	
	D	UPDATED PER DCC ACJ/RALY PROD ECO# 02197	8/16/85	



NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTANCE VALUES ARE IN OHMS, ±5%, ⅛ W.
   B. CAPACITANCE VALUES ARE IN MICROFARADS.
2. UNMARKED CAPACITORS ARE .01 μf.
3. COMPONENT TO BE ADDED OR TRIMMED IN TEST AS REQUIRED.

LAST REFDES. USED	UNUSED
L2	
U12 CR3	
RP4 Q15	
R76 T2	
C36 K3	

REFERENCE DRAWINGS:
ASSEMBLY: D9545-7077
FABRICATION: D9605-7076

DEO 12 XX

TDK- 57077	55200D XMTR
NEXT ASSY	USED ON

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO. DEO 12 XX

DR C. Smith	1-3-80
CHK	1-7-80
APPD	9-18-80

APPROVED
BY DIRECTION OF

tau-tron inc
Chelmsford, ma. 01824

DRAWING TITLE
SCHEMATIC
OUTPUT AMPLIFIER

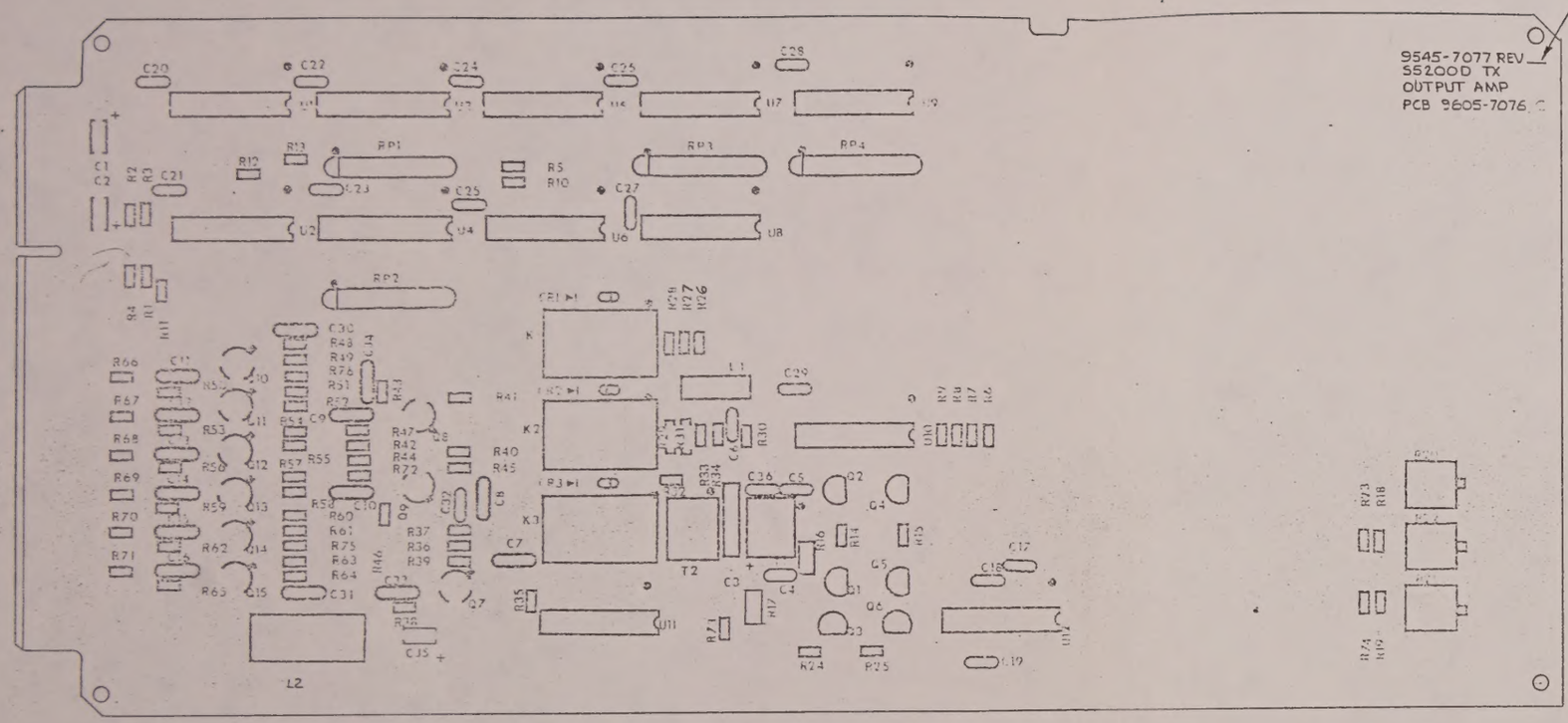
SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57075	D

SCALE | 55200D TX | SHEET 1 of 2

57075

	E	REDRAWN REPLACES REVD REV PER ECO#02377 RZ 11MAR86	3/10/86	PL	JC

SEE NOTE 1



NOTES:

1. PLACE THE ASSEMBLY PARTS LIST REVISION MARK ON THE ASSEMBLY IN DESIGNATED AREA.

DEC. 12 '86

WHERE APPLICABLE REMOVE ALL BURRS & BREAK SHARP EDGES TO .064	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ± ## FRACTIONS ± ## 3 PLACE DECIMALS ± ## 2 PLACE DECIMALS ± ## 1 PLACE DECIMALS ± ##	DRAWN NO J.T 9-16-80 B. COOPER 9-18-80 WEL 9-18-80	tau-tron DRAWING TITLE ASSEMBLY OUTPUT AMPLIFIER
E57154 S5200D TX NEXT ASSY USED ON APPLICATION	MATERIAL ##	APPROVED BY DIRECTION OF	USE FOR FURTHER DRAWING NO D DRAWING NO 57077 REV E SCALE 2/1 S5200D TX SHEET 1 OF 1

D

C

B

A

57077

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ZONE	LTR	DESCRIPTION	DATE	APPROVED
	E	REV. PER ECO # 02147	7/8/85	PK
	F	UPDATED PER DOC ACCURACY PROG ECO # 02197	8/16/85	PK

ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPROVED
	0	ORIGINATED C.S. 4/1/80	4-16-80	
	1	REV PER PDC 00719 C.S. 9-17-80	9-17-80	
	A	REVISED &RELEASED PER CO791	1-29-81	
	B	REV PER DCN 00861 C.S. 3-13-81	3-18-81	
	C	REV. PER ECO/01013	6-8-81	
	D	CHANGED R22 FROM 4.5K TO 4.32K 1% RNC60	3-31-82	

EXTERNAL CLOCK CONTROL

EXTERNAL CLOCK

+5V R49 1K R46 39Ω C2 C3

E1 75Ω, 0V E2 E3 75Ω, -2V

R7 200 R6 120 R3 75 R1 1K

U1 MC1650

CR3 1N4148

U5 MC1231

RP1 470 470 +5.2V

R18 200, ½W, 10% CW

C15 27pf

-5.2V

+5V C28 33, 10V C7, C13, C14, C19, C22, C24, C25, C26 .01 C1 33, 10V -5.2V

CLOCK PHASING

CLOCK 2 FROM TRANSMITTER GENERATOR 20

R35 120 R39 200 -5.2V R33 120 R30 200

E12 E10 E11 E9 U3 T0116

POSITIVE CLOCK EDGE IN CENTER OF DATA BIT E12-E10 E11-E9

DATA FROM TRANSMITTER GENERATOR 26

R5 30 R11 30 R17 30 R26 30

C18

Q2 2N3866 Q1 2N3866 C10 +5V R10 150 R3 150 17 CLOCK OUT TO FRONT PANEL SEE NOTE 3

R4 100 R2 39, ½W. R8 100 C4 -5.2V

Q4 2N3866 Q3 2N3866 C12 +5V R16 150 R27 150 31 DATA OUT TO FRONT PANEL SEE NOTE 3

R14 100 R13 39, ½W. R15 100 C11 -5.2V

Beware of mod for ECL

TRANSMITTER CLOCK OSCILLATOR

R44 82.5 1% R43 3.92K 1% Q5 MPS2363 C27 1000pf

Y1 44.736MHz C16 18pf NPO

R22 4.32K 1% C9 -5.2V R20 2.43K 1% R42 1100Ω CW R50 500

R21 392 1% C29 8-18pf C5 22pf

R24 392, 1% Q6 MPS2369 R31 5.11K, 1% C21 47pf N750 R32 392, 1% C8 U17 100pf R23 5.11K, 1% L1 39μH

U17 10105 22 CLOCK 1 TO TRANSMITTER GENERATOR

RP1 -5.2V 470 470

U10 10107 U17 10105

U10 10107 C23 1000pf C20 1000pf R40 3K R34 3K 470 470 RP1 -5.2V

JITTER ENABLE 19 E5 JITTER INPUT 21 E4 JITTER AMPLIFIER AND CONTROL

MONITOR AMPLIFIERS

AC POWER LOSS FROM STD INTERFACE 18 7404 U8 75451 R29 5.1K R28 5.1K 45 POWER LOSS 43 POWER LOSS

M SYNC FROM TRANSMITTER GENERATOR 40 PR SYNC FROM TRANSMITTER GENERATOR 36 U15 75451 R47 5.1K R37 5.1K 55 M SYNC 53 M SYNC

U16 75452 R46 5.1K R36 5.1K 51 PR SYNC 49 PR SYNC

TO REAR PANEL RIBBON CONNECTOR

EXTERNAL ERROR FROM REAR PANEL 44 R45 300 CR1 1N4148 CR2 IN5229 7404 42 EXTERNAL ERROR TO TRANSMITTER GENERATOR

X-BIT FROM REAR PANEL 47 R35 10K +5V 7404 38 X-BIT TO TRANSMITTER GENERATOR

LAST REF DES USED	UNUSED
R50	L1
RP1	Y1
C29	C8
CR3	
Q6	
U17	

NOTES:
1) UNLESS OTHERWISE SPECIFIED:
A. RESISTANCE VALUES ARE IN OHMS, ¼W, 5%.
B. CAPACITANCE VALUES ARE IN MICROFARADS.
2) UNMARKED CAPACITORS ARE .01mf.
3) COMPONENTS TO BE ADDED OR TRIMMED IN TEST AS REQUIRED.

REFERENCE DRAWINGS:
ASSEMBLY: D9545-7087
FABRICATION: D9605-7086

DEC 12 '86

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.	
TDK-57087	55200D XMTR
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO.		
DR C. Smith	4-1-80	
CHK JP	4-16-80	
APPD	4-16-80	
APPROVED		
BY DIRECTION OF		

tau-tron inc Chelmsford, Mo. 01824

DRAWING TITLE: SCHEMATIC OSCILLATOR/INTEREACE P.C.B.

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57085	F

SCALE — | 55200D | SHEET 1 OF 1

57085

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ZONE	LTR	DESCRIPTION	DATE	APPROVED
	E	REV. PER ECO# 02147	7/15/85	PK
	F	UPDATED PER DOC ACCURACY PROG ECO # 02197	8/16/85	PK

ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPROVED
	0	UNRELEASED C.S. 4/11/80	4-16-80	
	1	REV PER PDC 00719 C.S. 9-17-80	9-17-80	
	A	REVISED &RELEASED PER CO781	1-29-81	
	B	REV PER DCN 00861 C.S. 3-13-81	3-13-81	
	C	REV. PER ECO/01013	10-8-81	
	D	CHANGED R27 FROM 453K TO 4.32K 1% R/Away	3-31-82	

EXTERNAL CLOCK CONTROL

EXTERNAL CLOCK

+5V R49 1K

R42 39Ω C2

E2 E1 75Ω, 0V

E3 75Ω, -2V

R7 200 R6 120 R3 75 R1 1K

C3

U1 MC1650

CR3 1N4148

U5 MC10231

E7 E8 E6

RP1 470

-5.2V

RP1 470 470

R18 200, ½w, 10% CW

C15 27pf

TRANSMITTER CLOCK OSCILLATOR

R44 82.5 1%

R43 3.92K 1%

Q5 MPS2369

C27 1000pf

Y1 44.736MHz

C16 18pf NPO

R42 1100Ω

R50 500 CW

R32 4.32K 1%

C9

R27 2.43K 1%

R21 392 1%

C29 9-18pf

C5 22pf

+5.2V

R24 392, 1%

Q6 MPS2369

C21 470pf X7R

R31 5.11K, 1%

C17 1000pf

R23 5.11K 1%

L1 .36μH

C8

JITTER ENABLE 19 E5

JITTER INPUT 21 E4

JITTER AMPLIFIER AND CONTROL

+5V C28 33, 10V C7, C13, C14, C19, C22, C24, C25, C26 .01

C1 33, 10V

-5.2V

U17 10105

22 CLOCK 1 TO TRANSMITTER GENERATOR

RP1 470 470

U10 10107

U17 10105

U10 10107 C23 1000pf C20 1000pf

R40 3K R34 3K

470 470 RP1

-5.2V

CLOCK PHASING

CLOCK 2 FROM TRANSMITTER GENERATOR 20

E12 E10 E11 E9 U3 10116

R35 120 R39 220

R33 120 R30 220

-5.2V

POSITIVE CLOCK EDGE IN CENTER OF DATA BIT E12-E10 E11-E9

DATA FROM TRANSMITTER GENERATOR 26

C18

U5 10116

C10

R10 150 R9 150

Q1 2N3866

17 CLOCK OUT TO FRONT PANEL

SEE NOTE 3

R2 39, ½W

R8 100

C4

Beware of mod for ECL

+5V C12

R16 150 R27 150

Q4 2N3866 Q3 2N3866

31 DATA OUT TO FRONT PANEL

SEE NOTE 3

R17 30 R26 30

R14 100 R13 39, ½W R15 100

C11

-5.2V

MONITOR AMPLIFIERS

+5V

AC POWER LOSS FROM STD INTERFACE 18

7404 U8 75451

45 POWER LOSS

43 POWER LOSS

R25 5.1K R28 5.1K

M SYNC FROM TRANSMITTER GENERATOR 40

PR SYNC FROM TRANSMITTER GENERATOR 36

U15 75451

55 M SYNC

53 M SYNC

R47 5.1K R37 5.1K

TO REAR PANEL RIBBON CONNECTOR

U16 75452

51 PR SYNC

49 PR SYNC

R46 5.1K R36 5.1K

EXTERNAL ERROR FROM REAR PANEL 44

R45 300 CR1 1N4148 CR2 IN5229

U14 U12 7404

42 EXTERNAL ERROR TO TRANSMITTER GENERATOR

X-BIT FROM REAR PANEL 47

R35 10K +5V

U14 7404

38 X-BIT TO TRANSMITTER GENERATOR

LAST REF DES USED	UNUSED
R50	L1
RP1	Y1
C29	C6
CR3	
Q6	
U17	

NOTES:
1) UNLESS OTHERWISE SPECIFIED:
A. RESISTANCE VALUES ARE IN OHMS, 1/4W, 5%.
B. CAPACITANCE VALUES ARE IN MICROFARADS.
2) UNMARKED CAPACITORS ARE .01uf.
3) COMPONENTS TO BE ADDED OR TRIMMED IN TEST AS REQUIRED.

REFERENCE DRAWINGS:
ASSEMBLY: D9545-7087
FABRICATION: D9605-7086

DEC 12 [illegible]

TDK-57087	552000 XMTR
NEXT ASSY	USED ON
APPLICATION	

WHERE APPLICABLE REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO.

DR C. Smith	4-1-80
CHK	4-16-80
APPD	4-16-80
APPROVED	
BY DIRECTION OF	

tau-tron inc Chelmsford, ma. 01824

DRAWING TITLE
SCHEMATIC
OSCILLATOR/INTERFACE P.C.B.

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57085	F

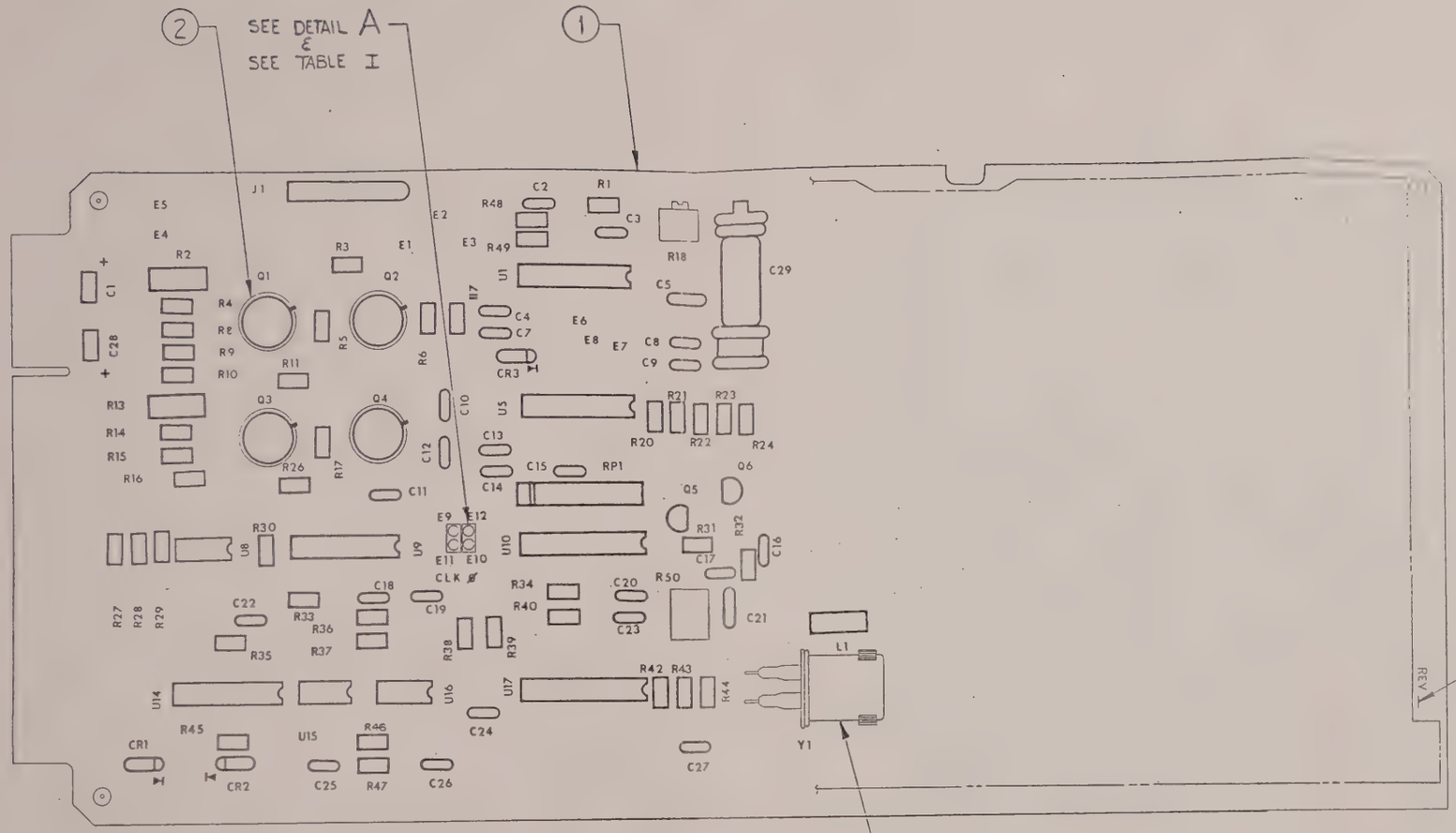
SCALE 1/1 | 552000 | SHEET 1 OF 1

57085

NOTICE OF CONFIDENTIAL INFORMATION

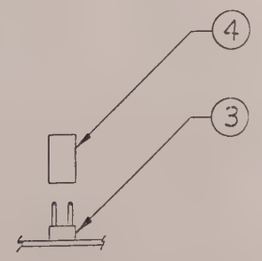
	H	REDRAWN, REPLACES REV G WITH CHG PER DOC ACCURACY PROG ECO # 02197	85/01/31	01/15/85

TABLE I JUMPERS	
FROM	TO
E9	E11
E12	E10



NOTES:

1. PLACE A PERMANENT REVISION LEVEL MARK ON THE ASSEMBLY IN THE DESIGNATED AREA.
2. INSTALL CRYSTAL AFTER SOCKET HAS BEEN INSTALLED.



DETAIL A

DR	C ATHERTON	1/23/81	
CHK	B. COOPER	1/29/81	
APPD	W. ROLLINS	1/29/81	

E-57158 S5200D TX
NEXT ASSY | USED ON
APPLICATION

APPROVED

BY DIRECTION OF

tau-tron
A SUBSIDIARY OF GENERAL SIGNAL

OSCILLATOR INTFC PCB ASSY

SIZE D | DRAWING NO. 57087 | REV H

SCALE 2/1 | S5200D TX | SHEET 1 OF 1

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REVISIONS			
ZONE	LTR	DESCRIPTION	DATE	APPROVED
		ORIGINATED 3 29 80 CGS.	4-7-80	JCH WJ
		REVISED PER PDC 00723 9-22-80	9-24-80	TPC
		REVISED & RELEASED PER DCN00770 12-12-80	1-9-81	TPC
	B	REV. PER ECO/C0973 APP 8 SEP 81	9-15-81	KS
	C	REV. PER ECO/1408 U.S.A.F. 28 MAY 83	6-6-83	RL TD
	D	REV PER ECO#1048 M.E.H 12-12-83	1-23-84	KS
	E	REV PER ECO# 02033 APP 85 JAN 17	11-21-85	RC
	F	UPDATED PER ECO #02181 TR. 7-19-88	7-19-88	RC

LAST REF DES USED		UNUSED
U43	TP16	
RP11	E17	
R35	Q2	
C45		
CR3		

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTANCE VALUES ARE IN OHMS, 1/4W, ±5%.
   B. CAPACITANCE VALUES ARE IN MICROFARADS.
2. ⊕ DENOTES 470Ω RESISTOR TO -5.2V.
3. ○—○ DENOTES WIRE JUMPER TYP E1, E2, E4, E5.

REFERENCE DRAWINGS:
ASSEMBLY: TDK-57010...
FABRICATION: TDG-57009

DEC 12 '86

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ± FRACTIONS ± 3 PLACE DECIMALS ± 2 PLACE DECIMALS ± 1 PLACE DECIMALS ± MATERIAL:
TDK-57010 | 552000 TX	
NEXT ASSY | USED ON	
APPLICATION	

CONTR NO.		
DR C. Smith	3-29-80	
CHK C. Smith	4-4-80	
APPD	4-9-80	
APPROVED		
BY DIRECTION OF		

tau-tron inc Chelmsford, ma. 01824

DRAWING TITLE: SCHEMATIC TRANSMIT GENERATOR PCB

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57008	F

SCALE — | 552000 TX | SHEET 1 OF 2

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REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
SEE SH.1 FOR REVISIONS				

R16 5.6K +5V
C31 220pf
U27 74123
SH.1, U10-5 — CH STROBE
R15 10K +5V
TP-3
TP-4
U28 14520
U29 14520
U38 14023
U23 14078
U30 14001
U19 14512
U18 14512
Q2 2N4401
TP5
MFPC → SH.1, U13-7
R6 10K
TP-1
DECODE M0 → SH.1, U8-5
TP-6
R5 10K
TP2
U10-4 PARITY
FROM SH.1 U21-7 BLUE(H)
FROM OSC INTERFACE 39 X-BIT
U20 14011
R7 10K
R8 10K
U43 14040 Q6
TP-7
E9 TEST E9
U38 14023
U30 14001
U41 14027
Q1 2N4401
R10 10K
R9 3K
TP-9
U39 14027
U40 14027
U30 14001
U41 14027
R11 10K
U36 7400
U37 7410
REAR PANEL SWITCH 44 ENABLE BURST ERROR(L)
FROM OSC INTERFACE 42 EXTERNAL ERROR
ERROR MODE
FROM STD INTERFACE 46 EXTERIOR ERROR ENABLE(H)
43 SINGLE BIT ERROR(H)
M-SYNC 40 TO OSC INTERFACE
BURST ERROR(L) → U13-11
SINGLE ERROR REQ(H) → U13-5
TO SH.1
TP-8
FROM SH.1 U1-2 CLOCK
U30A 10105
U17 10138
U10 10125
RP5 470 470 -5.2V
U32 74LS490
U33 14518
U34 14518
U35 14518
R35 2K, 1/8W +5V
R32 1.1K, 1/8W
R33 1.3K, 1/8W
R26 160
R39 470
R27
U42 10131
U42 10131
R29, 270
R28 1.1K
R24 2K
R25 1.3K
R17 5.1K +5V
U31 74150
FROM STD INTERFACE 39 2⁰(H) 41 2¹(H) 43 2²(H) 45 2³(H) 47 ERROR INSERT(H)
U36 7400
U30 14001
U20 14011
U20 14011

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ± FRACTIONS ± 3 PLACE DECIMALS ± 2 PLACE DECIMALS ± 1 PLACE DECIMALS ±	CONTR NO.	tau-tron inc Chelmsford, Mass. 01824
TDK-57010 | 55200D TX	MATERIAL:	DR C. Smith 3-25-80	DRAWING TITLE: SCHEMATIC TRANSMIT GENERATOR PCB
NEXT ASSY | USED ON		CHK	
APPLICATION		APPD 1-9-80	SIZE D | CODE IDENT NO. | DRAWING NO. 57008 | REV E
		APPROVED / BY DIRECTION OF	SCALE — | 55200D TX | SHEET 2 OF 2

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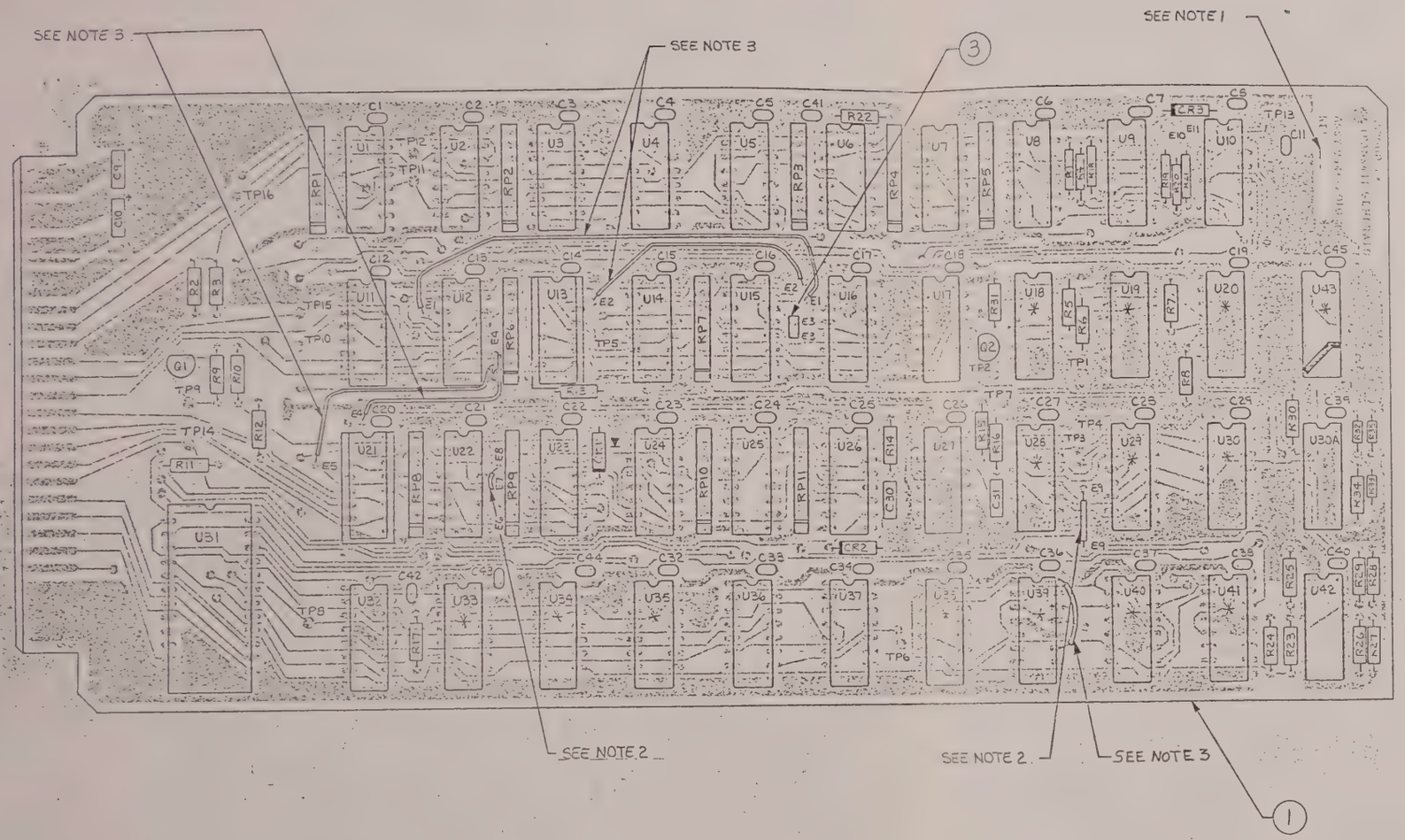
	H	REV PER ECO#02033 TMM 1-24-85	1-25-85	KL	
	J	UPDATED PER DOC ACCURACY PROG PER ECO#02178 6-28-85 DP	7-29-85	KL	MB
...	K	UPDATED PER ECO#02181 TB 8-8-85	8/11/15	KL	
	L	REV PER ECO# 02656 MCD 10/27/86	10/29/86	PK	



1. PLACE A PERMANENT REVISION LEVEL MARK ON THE ASSEMBLY IN THE DESIGNATED AREA.
2. JUMPERS TO BE = 24 AWG BUS WIRE WITH SLEEVING
3. JUMPERS TO BE = 30 AWG INSULATED WIRE
4. * - DENOTES STATIC SENSITIVE DEVICE

DES. IZ.

J.T	12-31-80	ASSEMBLY
B.COOPER	1-9-81	TRANSMIT GENERATOR PCB
W. ROLLINS	1-20-81	

S5200D TX

SEE P. L. 9545-7010

954 57010 L

S5200D TX SHEET 1

57010

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ZONE	LTR	DESCRIPTION	DATE	APPROVED
	Ø	ORIGINATED 3-24-80 C.S.	4-22-80	
	A	REVISED AND RELEASED TO PRODUCTION ECO PRC 00217	5-23-80	
	B	REVISED PER DCN # 00759 RVOD	1-9-81	
	C	REV PER ECO-01075 R.Nuñez 1-12-82	1-13-82	
	D	REV PER ECO-01123 R.Nuñez 5-19-82	6-11-82	
	E	REV PER ECO-1166 R.Nuñez 8-4-82	8-5-82	
	F	REV PER ECO# 1424 M.E.H 10-29-83		
	G	UPDATED PER DCC ACCURACY FREQ ECO # 02197	85-27-13	5/15/85

FROM GPIB CARD

U10 74LS241

U4 74LS241

READ

WRITE

RP2-8 RP2-6 RP2-4 RP2-2 1K

RP1-8 RP1-6 RP1-4 RP1-2 1K

ZORZ

U19 4416-8034 ADD DECODER

U20 74LS155 WRITE DECODE

+5V R1 10K

U1 74LS74 GPIB LATCH

IS CPU IN OSC OUT

C14 .33µF

R17 1K 5% +5 0=LOCAL 1=REMOTE

LOC/REM SELECTS 74LS157 U5

DATA LATCHES 74LS175 U13

LEVEL SEL A

LEVEL SEL B

PAT. SEL.

FORM. SEL.

LEVEL SELECTOR U7 74LS155

74LS04 HIGH DSX-3 LOW

U3 74LS155

READ DECODER

74LS20 U14 BUS READ DETECTOR

U18 74LS08

GPIB

74LS157 U15

74LS157 U21

0=44 16 1=45 16

74LS157 U11

74LS386 U3

74LS175 U16

1K 5% 1/8W +5 R18

74LS157 U6

74LS175 U22

ERROR FREE

ERROR INSERT

EXT. ERROR

RESET

C15 120 PF

RESET ACTIVE LOW

74LS04 U24 74LS00

74LS157 U12

BIT ERROR

BIPOLAR VIOLATION

74LS08 U23 74LS02

74LS08 U18 74LS03

J2-28 LEVEL SELECT A

27 LEVEL SELECT B

23 PATTERN SELECT

24 FORMAT SELECT

2⁰ 21 22 23

26 22 25 ERROR FREE

20 ERROR INSERT

19 EXTERNAL ERROR

30 RESET

37 SINGLE BIT ERROR

35 BIPOLAR VIOLATION

31 AC POWER LOSS

J2-5

FROM FRONT PANEL CONTROL SWITCH

J2 1 2 J2 3 4 J1 1 2 J1 3 4 J1 5 6

C1 33,10V C2-C13 .01µF +5V -5.2V

ADDRESS INPUT		DECODER OUTPUT				READ/WRITE DECODE OUT			
ASCII	HEX	04	03	02	01	2Y1	2Y2	2Y3	1Y0
NULL	00	0	0	0	1	0	1	1	1
D	44	0	0	1	0	1	0	1	1
E	45	0	0	1	1	1	1	0	1
F	46	0	0	1	1	1	1	1	0

DESIG	WITH GPIB XMTR STD GPIB BUS INTERFACE QTY	WITHOUT GPIB XMTR STD BUS INTERFACE QTY
U4	1	0 (NOT USED)
U8	1	0
U10	1	0
U14	1	0
U15	1	0
U17	1	0
U19	1	0
U20	1	0
U21	1	0
RP2	1	0
RP1-RP3	1 EACH	0 EACH

LAST REF DES USED	UNUSED
R18	
C15	
U24	
RP2	

0=PRBS 1=FIXED PATTERN

DATA PATTERN SELECTOR 74LS158 U3

+5V R2 5.1K R3 5.1K R4 5.1K R5 5.1K

1111 20 1010 22 1100 24

REAR PANEL FIXED PATTERN SELECTOR ACTIVE LOW INPUTS

READ MULTIPLEXORS

GPIB 74LS157 U17

74LS157 U25

74LS157 U26

AC POWER LOSS

HIGH DSX-3 LOW FORMAT 2⁰ 21 22 23 ERROR FREE ERROR INSERT EXT. ERROR RESET REMOTE PRBS ALL ONES 1010--- 1100--- REMOTE DC POWER LOSS

TO OSC/INTERFACE

TO OUTPUT AMP

TO TRANSMITTER GENERATOR

TO OUTPUT AMP.

TO TRANSMITTER GENERATOR

FROM REAR PANEL P.C. BOARD

TO FRONT PANEL DISPLAY DRIVERS

J2-36 33 32 8 13 14 15 16 21 17 18 38 34 7 6 3 11 12 J2-10

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTANCE VALUES ARE IN OHMS, 1/4W, ±5%.
   B. CAPACITANCE VALUES ARE IN MICROFARADS.
2. ☐ DENOTES PIN CONNECTOR.

TDK-57218	55200D XMTR
TDK-57084	55200D XMTR
NEXT ASSY	USED ON
APPLICATION	

WHERE APPLICABLE REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO. DEC. 12

DR C. Smith	3-24-80
CHK K. Eide	4-15-80
APPD	4-22-80
APPROVED	
BY DIRECTION OF	

tau-tron inc Chelmsford, Ma. 01824

DRAWING TITLE
SCHEMATIC
STD & STD GPIB INTERFACE PCB

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57082	G

SCALE — | 55200D XMTR | SHEET 1 of 1

57082

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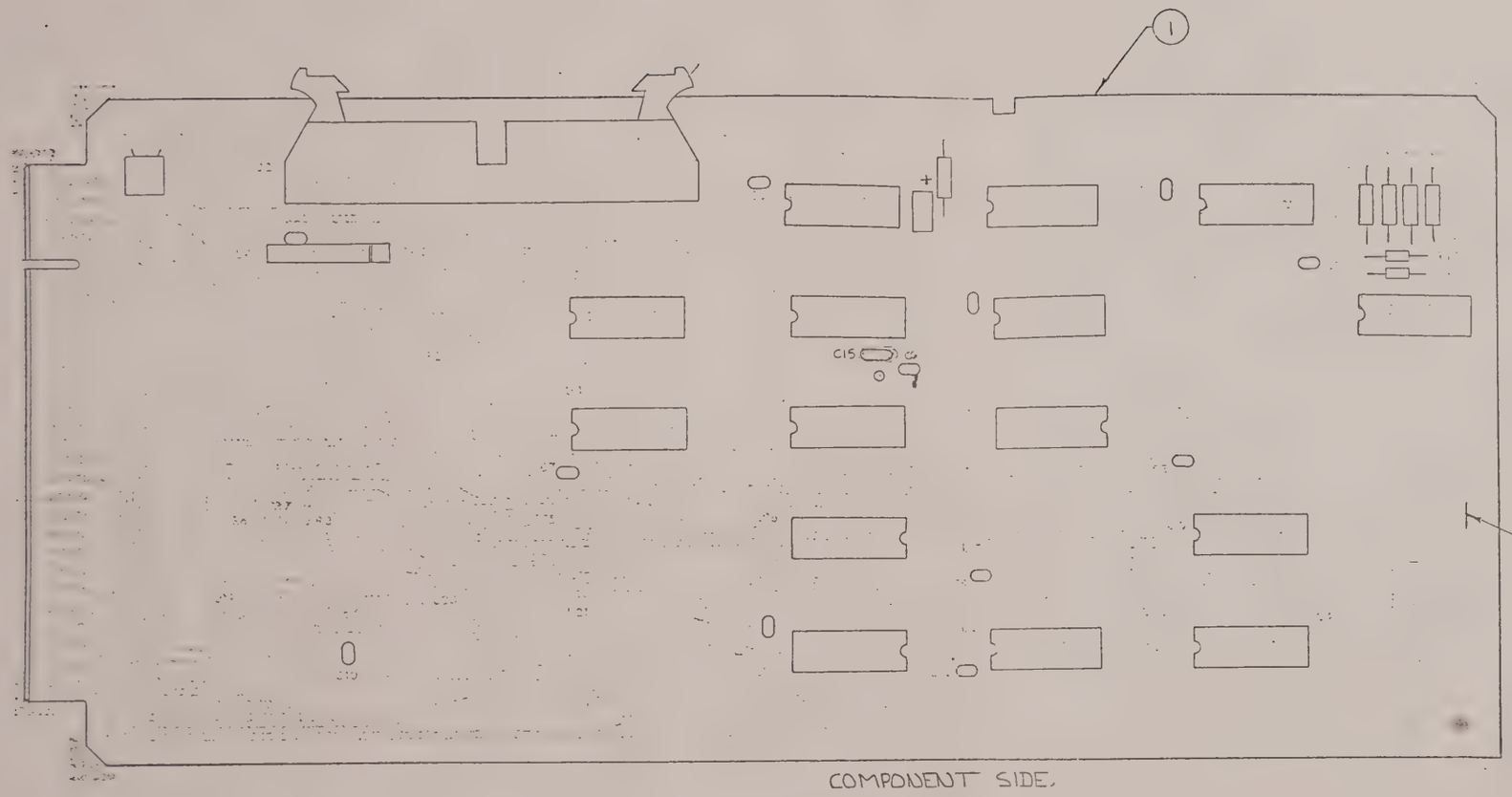
TEN PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE
OF SAID COMPANY.

	D	REDRAWN PER ECO-1123 RN mm 2 6-7-81		
	E	REV PER ECO-01160 [illegible] 8-4-83		
	F	REV. PER ECO#01324 DRR 3-4-83		
	G	REV. PER ECO#01484 M.E.H 10-24-83		
	H	UPDATED PER DOC ACCURACY PROG ECO # 02197		



COMPONENT SIDE.

NOTES:
1. ~~UNLESS OTHERWISE SPECIFIED~~
~~A. RESISTANCE VALUES ARE IN OHMS~~
~~B. CAPACITANCE VALUES ARE IN MICRO FARADS.~~
2. ⊖ ~~DENOTES .040 CAVITIES.~~
3. PLACE A PERMANENT REVISION LEVAL MARK ON THE ASSY IN THE DESIGNATED AREA.
4. ~~ORIENTATE U8, U16, U22 IN OPPOSITE DIRECTION FROM REMAINING IC'S.~~

DEC. 12. '86

BUDD 1-2-81

WR 1-9-82

ASSEMBLY
STD BUS INTERFACE PCB.

E-57154 SSCODD TX

945 57084 H

2-1 SSCODD TX

57084

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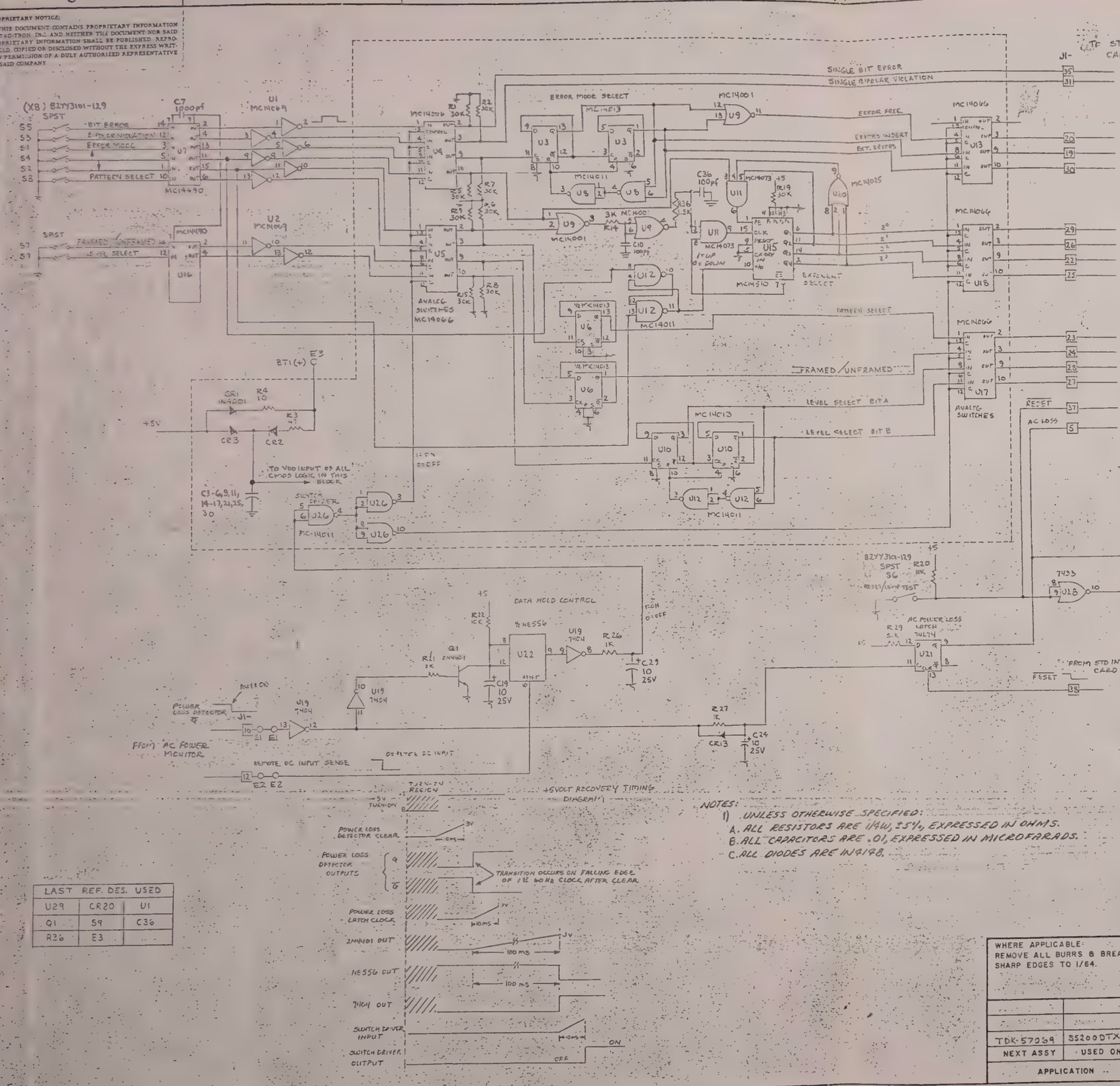
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	0	ORIGINATED	4/1/80	
	1	REV PER PDC 00721	9-22-80	
	A	REV. PER DCN 00795	2-6-81	
	A1	REV. PER DCN 00965	2-6-81	
	B	UPDATED PER DCC ACCURACY REQ. ECO # 02197	2-15-85	



NOTES:
1) UNLESS OTHERWISE SPECIFIED:
A. ALL RESISTORS ARE 1/4W, ±5%, EXPRESSED IN OHMS.
B. ALL CAPACITORS ARE .01, EXPRESSED IN MICROFARADS.
C. ALL DIODES ARE IN4148.

LAST REF. DES. USED		
U29	CR20	U1
Q1	S9	C36
R36	E3	

TDK-57039	S5200DTX
NEXT ASSY	USED ON
APPLICATION	

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO.

DR	P. GAUTHIER	4/4/80
CHK	G. LL	4/8/80
APPD	[illegible]	4-17-80
APPROVED		
BY DIRECTION OF		

tau-tron inc
Chelmsford, ma. 01824

DRAWING TITLE
S5200D TRANSMITTER
FRONT PANEL CONTROL & DISPLAY

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57067	B
SCALE —	S5200D	SHEET 1 OF 1	

57067

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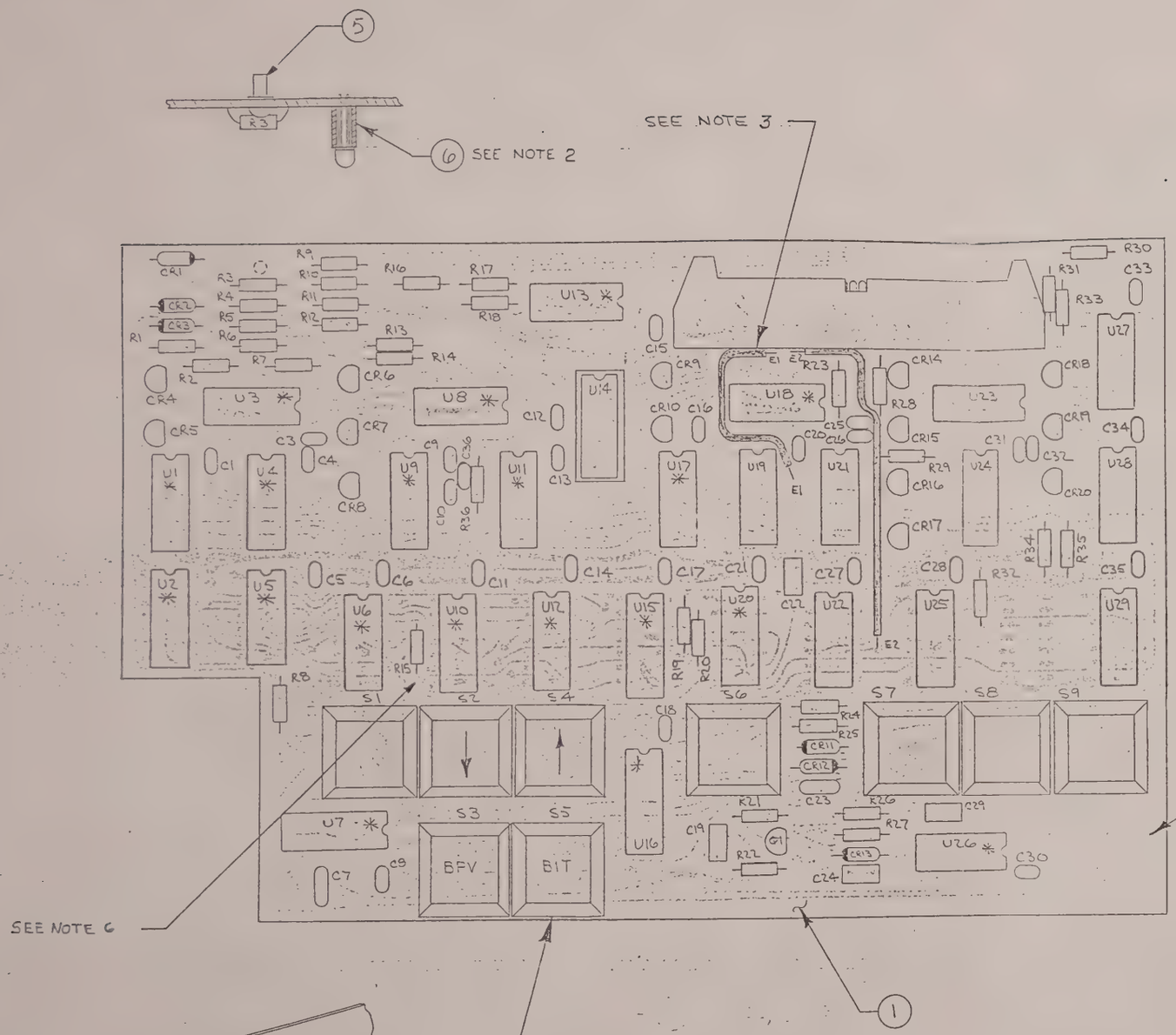
..	E	REV PER ECO#01682 JM 1-26-84	84 Jan 31	
	F	REV PER ECO# 01867 M.E.H 6-25-84	7-6-84	
	G	REV PER ECO# 02048 [illegible] 85 Jan 29	[illegible]	
	H	UPDATED PER DOC ACCURACY PROJ ECO # 02197	8/[illegible]	
	H1	REV PER AUDIT # A0464	10/2/86	



NOTES:

1. INSTALL SWITCHES AFTER WAVE SOLDERING. CLEAN WITH ISOPROPYL ALCOHOL.
2. ITEM NO. 6 TO BE USED WITH CR4-CR10, CR14-CR20.
3. JUMPERS TO BE #26 AWG STRANDED INSULATED WIRE.
4. PLACE A PERMANENT REVISION LEVEL MARK ON THE ASSEMBLY IN THE DESIGNATED AREA.
5. * DENOTES STATIC SENSITIVE DEVICE.
6. REMOVE R1 LOCATED UNDER R15 ON COMPONENT SILK SCREEN.

57069

DEC. 12, '86

C.S.	9-20-80	TRANSMITTER FRONT PANEL CONTROL & DISPLAY PCB
R.B.	9-25-80	
WEL	9-25-80	

S5200 DTX

57069 H1

2/1 S5200D 1 OF 1

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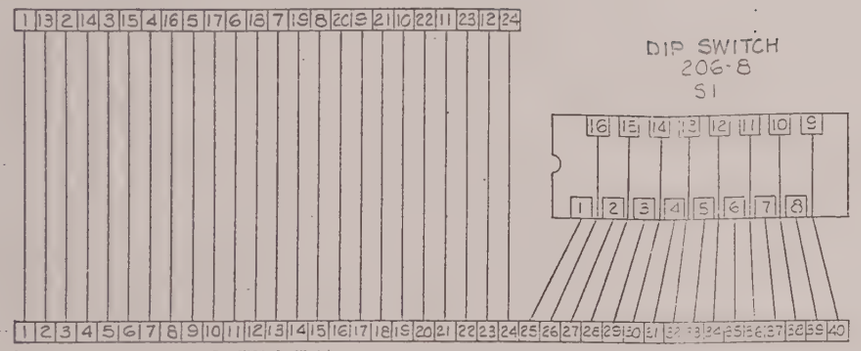
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	0	ORIG: PER PDC 00718 X J 9-3-80	9-15-80	B. Cooper
	1	REV PER PDC # 00784 BUDD	11-12-80	BAC KB
	A	REV PER DCN 00807 C.S. 12-29-80	1-6-81	BAC LHR
	B	REV PER ECO # 00949 C.S.	6-24-81	LHR KB
	C	UPDATED PER DOC ACCURACY PROG ECO # 02197 8/19/81	8/19/85	PK

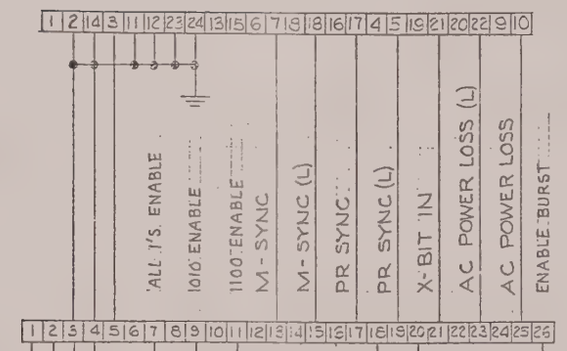
GPIB
57-20240-8
J3

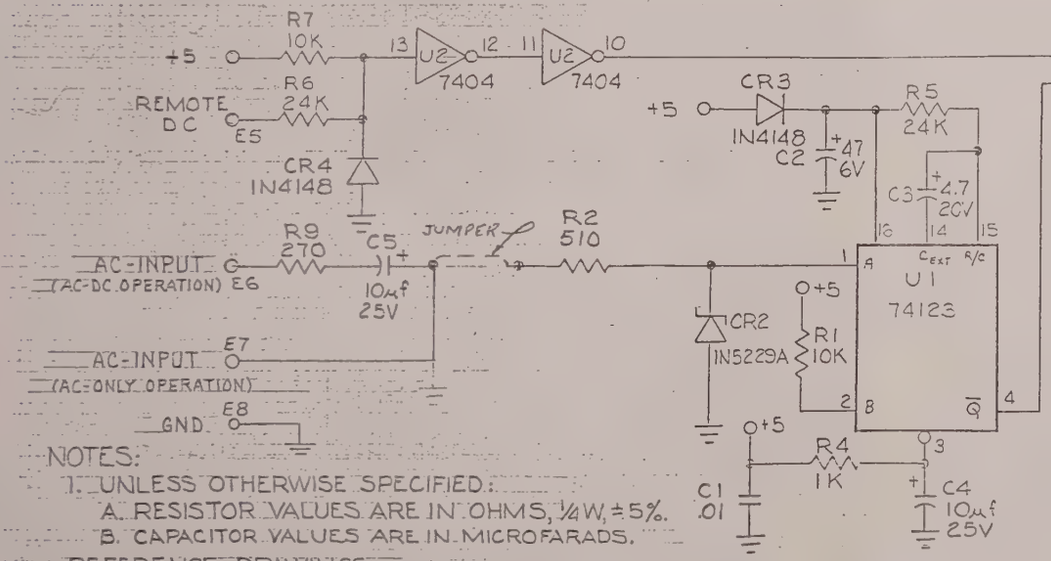


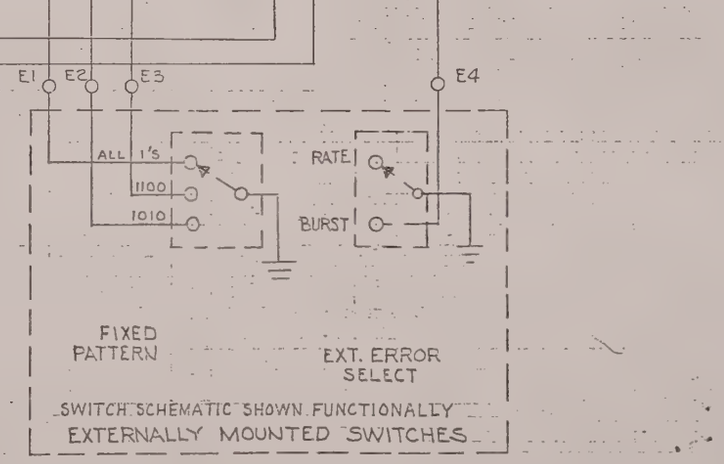
DIP SWITCH
206-8
S1

J4
609-4027

MONITOR
57-10240-3
J2


1 2 14 3 11 12 23 24 13 15 6 7 18 8 16 17 4 5 15 21 20 22 9 10
'ALL 1'S ENABLE
1010 ENABLE
1100 ENABLE
M-SYNC
M-SYNC (L)
PR SYNC
PR SYNC (L)
X-BIT IN
AC POWER LOSS (L)
AC POWER LOSS
ENABLE BURST





NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTOR VALUES ARE IN OHMS, ¼W, ±5%.
   B. CAPACITOR VALUES ARE IN MICROFARADS.

REFERENCE DRAWINGS:
ASSEMBLY: TCK-57186
FABRICATION: TCG-57185

U2	
S1	
R9	
J3	
CR4	R3,8
C3	CR1
LAST USED	UNUSED
APPLICATION	

WHERE APPLICABLE:
REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

C-57186	S5200D TX
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO.

DR Y.J.	9-3-80
CHK B. Cooper	9-15-80
APPD WEN	9-18-80

APPROVED
BY DIRECTION OF

tau-tron inc
Chelmsford, Ma. 01824

DRAWING TITLE
C. I. 66 SCHEMATIC
TX REAR PANEL INTERFACE BOARD

SIZE	CODE IDENT NO.	DRAWING NO.	REV
C		57184	C

SCALE H | S5200D TX | SHEET 1 OF 1

57184

07-0045 (6/71) .003 MYLAR

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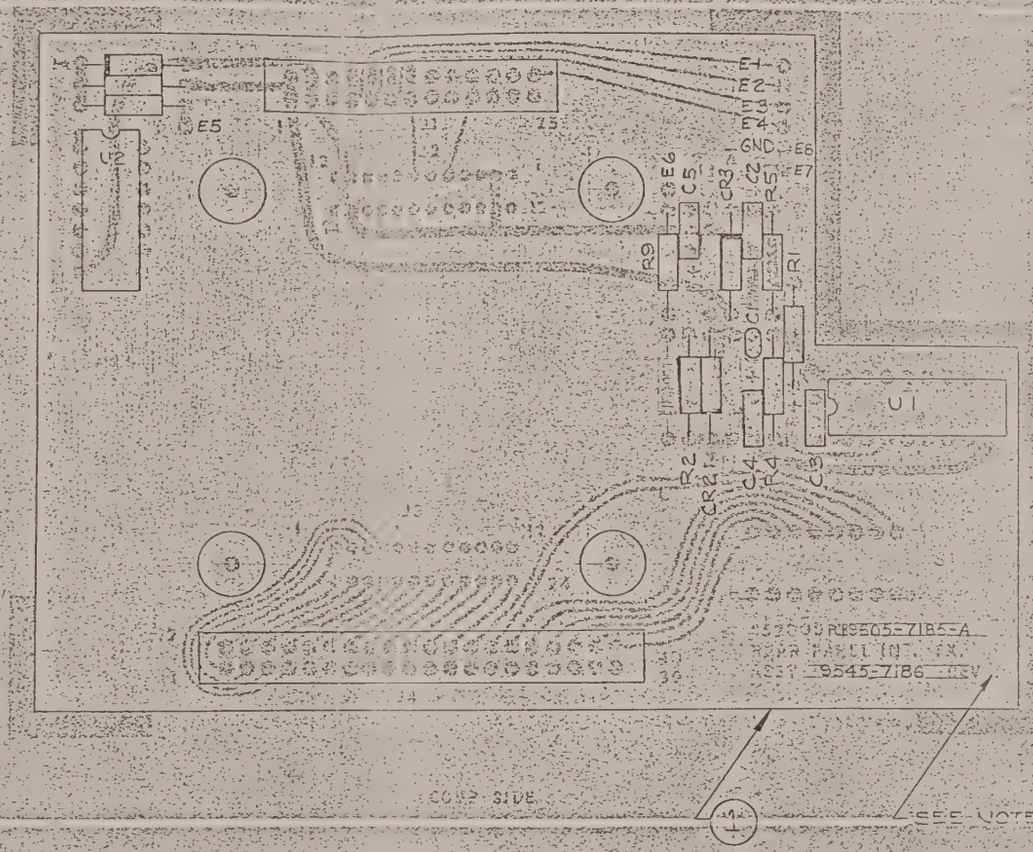
REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	O	ORIG. PER PDC 00718 GJ 9-2-80	9-15-80	B Cooper
	I	REV PER PDC# 00784 BUDD	11-12-80	DAC KB
	A	REV PER DCN 00807 C.S. 12-29-80	1-6-81	DAC WM
	B	REV PER ECO# 00949 C.S.	6-24-81	WM KB
	C	REV PER ECO# 01735 M.E.H 2-21-84	2-23-84	R.B.
	D	UPDATED PER DOC ACCURACY PROG ECO # 02197	6/15/85	PR



NOTES:
1. ~~UNLESS OTHERWISE SPECIFIED,~~
~~A RESISTOR VALUES ARE IN OHMS 1/4W ±5%~~
~~B CAPACITOR VALUES ARE IN MICROFARADS~~
2. SEE SHEET 2 FOR COMPONENTS ON WIRING SIDE
3. PLACE A PERMANENT REVISION LEVEL MARK ON THE ASS'Y IN THE DESIGNATED AREA

57186

D 57144	S5200D TX
NEXT ASSY	USED ON

WHERE APPLICABLE REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ANGLES ±
FRACTIONS
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL

CONTR NO.

DR	GJ	9-2-80
CHK	B. Cooper	9-15-80
ENGR	WEL	9-15-80
APPROVED		

TAU-TRON INC.
CHATSWORTH, CALIFORNIA 91311

DRAWING TITLE
ASSEMBLY
REAR PANEL INTERFACE TX

SIZE	DRAWING NO.	REV.
C	57186	D

2/1 S5200D TX 1 OF 2

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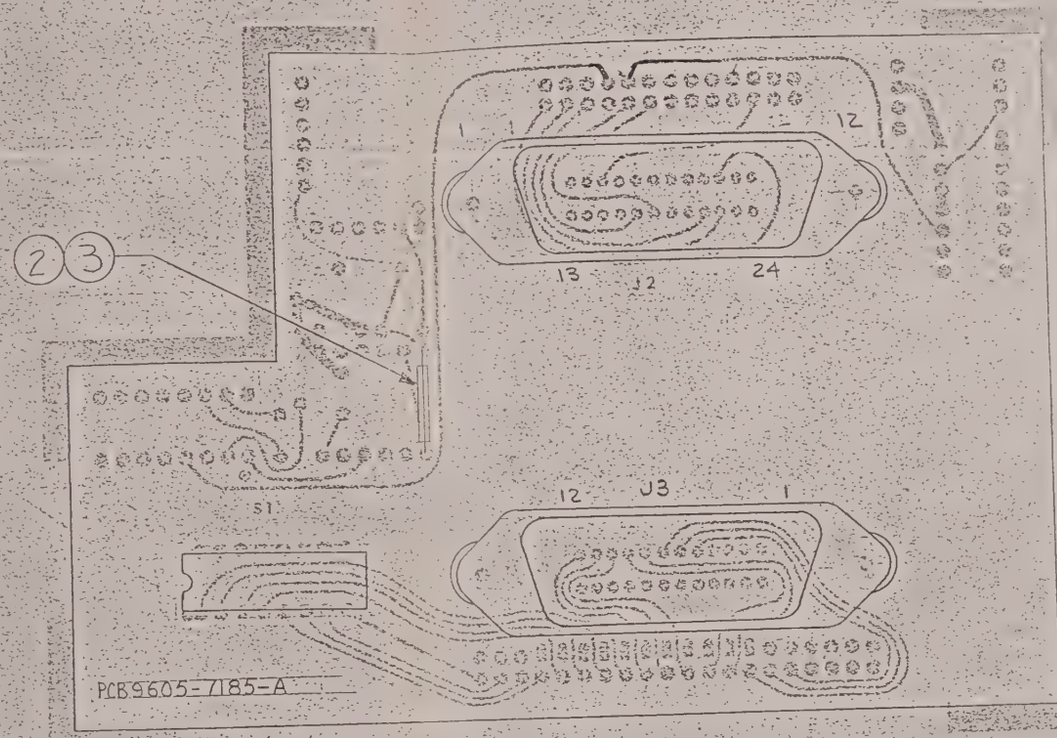
		SEE SHEET 1 FOR REVISIONS		



WIRING SIDE

	J. J.	9-2-80	
	B. Cooper	2-15-80	
	W.E.L.	4-15-80	
D 57144 S5200D.TX			ASSEMBLY REAR PANEL INTERFACE TX
			C 954 | 57186 | D
			SCALE 2/1 | S5200D.TX | SHEET 2 OF 2

57186

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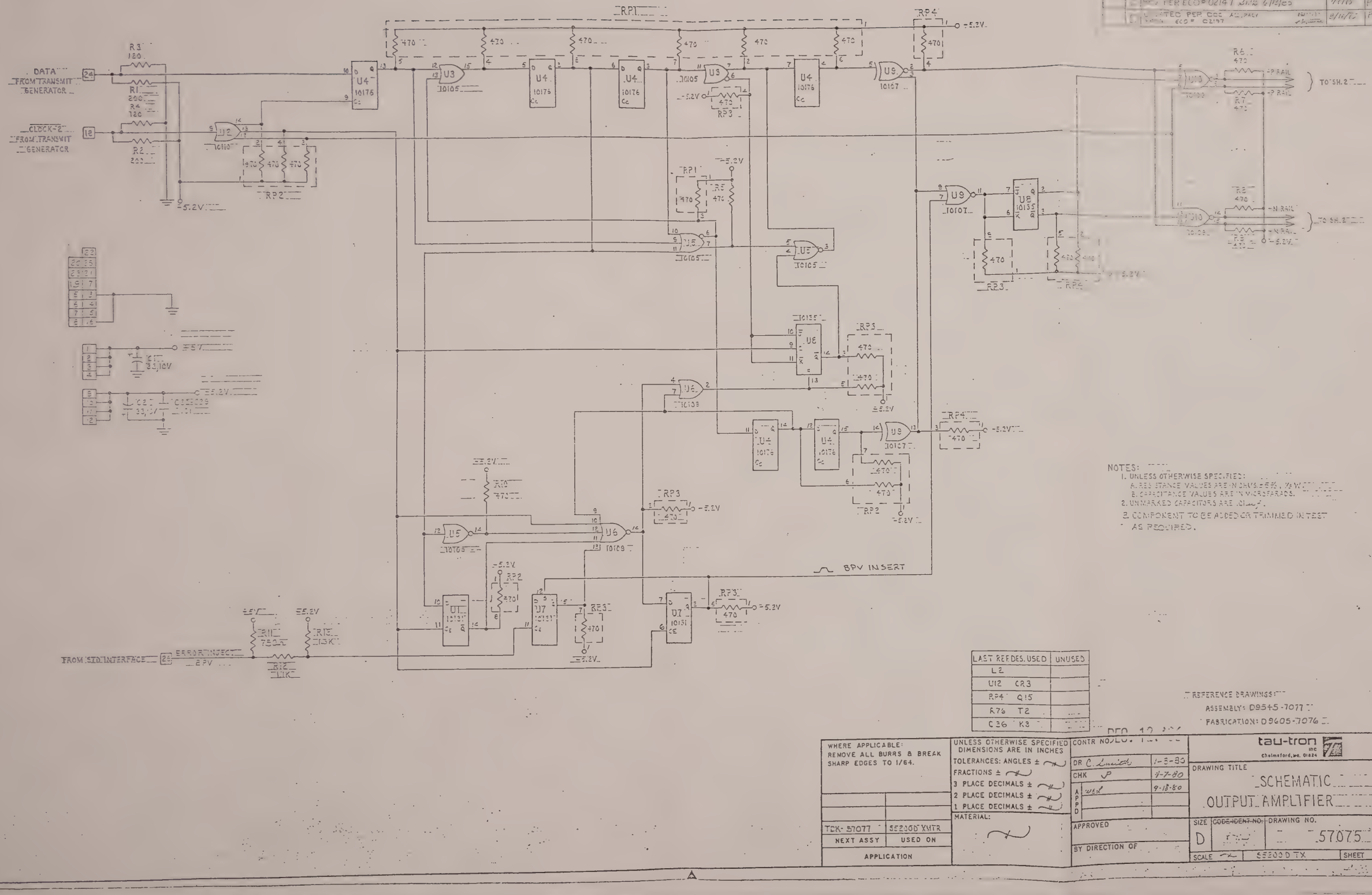
1	REVISED PER PDC 00780	9-15-80	9-18-80	
A	REVISED RELEASED PER DCN 00784	12-17-80	12-18-80	
B	REV PER DCN 03862 C.S	3-16-81	3-18-81	
C	REV PER ECO# 02147	6/13/85	6/19/85	
D	UPDATED PER ECO# 02197	11/14/85	11/18/85	



NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTANCE VALUES ARE IN OHMS ±5%, ¼W
   B. CAPACITANCE VALUES ARE IN MICROFARADS.
2. UNMARKED CAPACITORS ARE .01μF.
3. COMPONENT TO BE ADDED OR TRIMMED IN TEST AS REQUIRED.

LAST REF DES. USED	UNUSED
L2	
U12 CR3	
RP4 Q15	
R76 T2	
C36 K3	

REFERENCE DRAWINGS:
ASSEMBLY: D9545-7077
FABRICATION: D9405-7076

DRN 12 [illegible]

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.	
TCK- 57077	55300D XMTR
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO/LO.		
DR C. Lynch	1-8-80	
CHK JP	1-7-80	
APPD West	9-18-80	
APPROVED		
BY DIRECTION OF		

tau-tron inc
Chelmsford, Mass. 01824

DRAWING TITLE
SCHEMATIC
OUTPUT AMPLIFIER

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D	[illegible]	57075	D

SCALE | 55300D TX | SHEET 1 of 2

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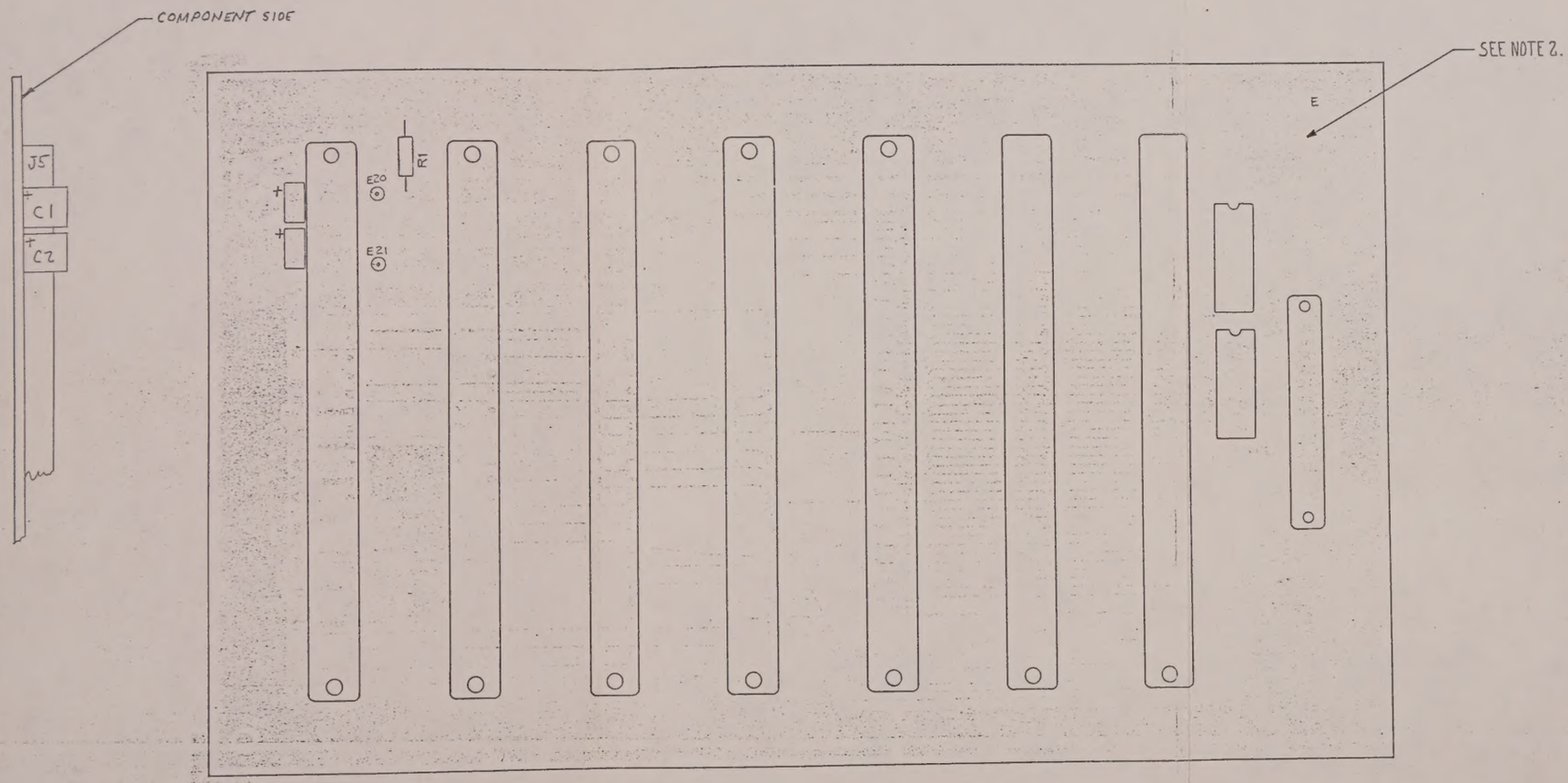
	C	REDRAWN PER ECO# 01123 BMB 5/5/82	5/6/82	
	D	REV PER ECO-1171 RWinst	7-19-82	LC TD
	E	REV PER ECO-01253 RR 27 OCT 82	10-29-82	AAM
	F	UPDATED PER DOC ACCURACY 85/07/23 PROG ECO = 02197	8/14/85	PK /VS



NOTES:
1. ~~UNLESS OTHERWISE SPECIFIED:~~
~~A)RESISTANCE VALUES ARE IN OHMS ±5%~~
~~B)CAPACITANCE VALUES ARE IN MICROFARADS.~~
2. PLACE A PERMANENT REVISION LEVEL MARK ON THE ASSEMBLY IN THE DESIGNATED AREA.

DEC. 12. '86

C. SMITH 1-8-81
B. COOPER 1-12-81
W. ROLLINS 1-14-81

ASSEMBLY
TX MOTHER BOARD P.C.B.

57377 S5200E TX
57058 S5200D TX

57058
2/1 S5200D TX

57058

10 Lyberty Way, Westford, MA 01886
(617) 692-5100 Telex 750245 1-800-TAU-TRON (Outside MA)